

- inoculating the mammal with a boosting immunization with a second recombinant vector comprising a second DNA vector and the gene encoding said antigen, wherein said second DNA vector is different from said first DNA vector, thereby inducing an enhanced immunological response.

2. (amended) The method according to claim 1, wherein the first recombinant vector comprises a recombinant vaccinia virus vector.

3. (amended) The method according to claim 1, wherein the first recombinant vector comprises a recombinant fowlpox virus vector.

4. (amended) The method according to claim 1, wherein the first recombinant vector comprises an adenovirus vector.

5. (amended) The method according to claim 1, wherein the recombinant vectors further comprise a gene encoding an immunostimulatory molecule.

6. (amended) The method according to claim 1, wherein the second recombinant vector comprises a recombinant vaccinia virus vector.

7. (amended) The method according to claim 1 wherein the second recombinant vector comprises a recombinant fowlpox virus vector.

9. (amended) A method for treatment of a cancer patient using heterologous boosting immunization as immunotherapy, said method comprising the steps of:

- immunizing said patient with an effective amount of a first recombinant vector comprising a first viral vector and a gene encoding a tumor-associated antigen; and

- boosting said patient with an effective amount of a second recombinant vector comprising a second viral vector and the gene encoding the tumor-associated antigen, wherein said second viral vector is different from said first viral vector, thereby treating said patient.

10. (amended) The method according to claim 9, wherein the tumor-associated antigen comprises gp100.

11. (amended) The method according to claim 9, wherein the tumor-associated antigen comprises MART-1.

12. (amended) The method according to claim 9, wherein the tumor-associated antigen comprises TRP-1.

13. (amended) The method according to claim 9, wherein the tumor-associated antigen comprises TRP-2.

14. (amended) The method according to claim 9, wherein the recombinant vectors further comprise a gene encoding an immunostimulatory molecule.

15. (amended) The method according to claim 9, wherein the first viral vector comprises a vaccinia virus.

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